

Attorney Docket No.: 30128/32000

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

APPELLANT: Theodore W. Meyers

) Certificate of Electronic Submission

APPLICATION NO.: 09/652,927

)

FILED: October 31, 2000

)

FOR: TEE BAFFLE FOR USE AT
INLET OR OUTLET OF SEPTIC AND
OTHER ON-SITE WASTE DISPOSAL
SYSTEMS

) I hereby certify that this paper is being submitted
electronically via EFS-Web on September 12,
2006, and is addressed to Mail Stop Appeal Brief-
Patents, Commissioner for Patents,

) P.O. Box 1450, Alexandria, VA 22313-1450.

)

)

EXAMINER: LUGO

) 
Jeremy R. Kriegel, Reg. No. 39,257

ART UNIT: 3677

)

CONFIRMATION NO.: 4367

)

APPELLANT'S REPLY TO EXAMINER'S ANSWER

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPELLANT'S REPLY TO EXAMINER'S ANSWER

I. INTRODUCTORY COMMENTS

This Appellant's Reply to Examiner's Answer is submitted pursuant to 37 C.F.R. § 41.41(a)(1), in reply to the Examiner's Answer mailed July 12, 2006. It is believed that no fees are necessary in connection with the present Reply Brief. However, in the event any fees are due, kindly charge the cost thereof to our Deposit Account No. 13-2855.

II. REPLIES TO ARGUMENTS

A. Reply to Arguments in view of Morrison as modified by Carrow

In addressing the Appellant's arguments in the Appeal Brief, the Examiner's Answer first reminds the Applicant that arguments that a reference is non-analogous to or teaches a way from the instant invention are not relevant to a rejection based upon anticipation. Examiner's Answer, at 8, lines 16-17. Inasmuch as all of the rejections on appeal are obviousness rejections under 35 U.S.C. § 103 (*i.e.* none of the rejections on appeal are anticipation rejections under 35 U.S.C. § 102), it is submitted that arguments concerning a reference being non-analogous are indeed relevant to the rejections on appeal.

Next, the Examiner's Answer argues that the language in the preamble of claims 1 and 23 concerning the tee being for use at the inlet or outlet of a septic tank is considered as an intended use, and does not impose any structural limitation upon the claimed apparatus which differentiates it from a prior art reference disclosing the structural limitations of the claim. Examiner's Answer, at 8-9. However, there are limitations recited in the main body of both claims 1 and 23 that breathe sufficient life into the language "for use at the inlet or outlet of a septic tank" so as to in fact impose a structural limitation on the claimed apparatus. Specifically, the language "inlet/outlet port," in the context of the preamble's language "at the inlet or outlet

of a septic tank”, clarifies that the port is at the inlet or outlet of a septic tank, and has the versatility to be positioned in either location of a septic tank. Furthermore, dependent claim 20 relies upon the language “a septic tank” in the preamble of claim 1 (from which claim 20 depends, by way of intermediate claims 4 and 19) as antecedent basis for “a clear zone of the septic tank”.¹ The apparatus of the Applicant’s invention, as claimed, is a septic tank tee, and not a tee for plumbing or other applications besides the inlet or outlet of septic tanks. Morrison should therefore be considered non-analogous art.

The Examiner’s Answer, for the first time during the prosecution of the application on appeal, argues that the claim language does not require that the first outer diameter is different from the second outer diameter. However, it is respectfully submitted that the claim language would be understood by one of ordinary skill in the art to inherently require that the second outer diameter is different from the first outer diameter. If the first and second outer pipe diameters were identical, there would be no need to adapt the inlet/outlet hub to receive a pipe of the second outer diameter, such as by insertion of a reducer bushing. It is therefore not necessary to amend the claims to indicate the second outer diameter is a different diameter than the first outer diameter (although the Appellant would be willing to do so if necessary to place the claims in condition for allowance).

Next, the Examiner’s Answer attempts to demonstrate that Morrison illustrates the inlet port is capable of receiving a pipe with first and second outer diameters, where the second outer

¹ Dependent claim 20 was amended to change the language “zone of a septic tank when the tee is mounted at a septic tank outlet” to “zone of the septic tank when the tee is mounted at the septic tank outlet”, at the suggestion of the Examiner, in response to a required correction to overcome an objection based on an alleged informality. *See* Office Action of October 20, 2004, page 2, and Amendment Under 37 C.F.R. 1.111, submitted March 21, 2005, at 6. As such, it is respectfully submitted that the Office Action of October 20, 2004 concedes the tee of claim 1 is a septic tank tee.

diameter is different from the first outer diameter, pointing for the first time to an element other than element a6 (which is conceded in the Examiner's Answer to disclose a ring). Examiner's Answer, at 10, lines 7-9. However, inasmuch as Morrison is considered non-analogous art, any such showing in Morrison does not support, or suggest to a person of ordinary skill in the art, the proposed combination of Morrison as modified by Carrow.

B. Reply to Arguments in view of Ramm as modified by Carrow

The Examiner's Answer indicates that at attachments #4 and #5 thereto, Ramm illustrates an inlet/outlet port capable of receiving pipes with first and second outer diameters. Examiner's Answer, at 10, lines 15-18. It is respectfully submitted that the **modified** drawings of Ramm, U.S. Patent No. 3,633,943 included as attachments #4 and #5 of the Examiner's Answer do not accurately represent what would occur if one were to attempt to insert into the Ramm fitting a pipe of an outer diameter approximately equal to (or just slightly less than) the diameter of the portion of the port of the pipe fitting of Ramm designated by reference number 10. Reference 10 is described in the Ramm reference as a groove to accommodate a rubber ring gasket, which gasket cooperates with a pipe end to form a fluid tight seal. Column 1, lines 72-75.

As can be appreciated by viewing Figs. 1 and 3 of the actual Ramm patent (a copy of which is attached hereto), there is an annular lip, which is an integral part of the pipe fitting, provided to retain a rubber ring gasket in the groove 10. The annular lip necessarily has an inner diameter less than the diameter of the groove 10, and the lip appears to have a diameter equal to the diameter of the portion of Ramm into which a pipe is intended to be received (*i.e.*, that portion into which a pipe is shown in the lower portion of Attachment #5, labeled "inlet/outlet receiving a pipe with a second outer diameter"). Therefore, it is respectfully submitted that the representation at the top of the page of Attachment #5 to the Examiner's Answer, labeled

“inlet/outlet port receiving a pipe of a first outer diameter,” is an inaccurate depiction of Ramm, inasmuch as it shows a pipe having an outer diameter seated against the groove 10 and extending beyond the end of the port, notwithstanding the presence of the gasket-retaining lip in the actual Ramm reference. This is not possible, since the annular lip would prevent insertion of the pipe. As such, Ramm does not teach or suggest to one skilled in the art the capability of receiving different pipe sizes.

C. Reply to Arguments in view of Morrison as modified by Carrow and Wyre

While Morrison is considered non-analogous for the reasons argued in the Appeal Brief and in Section II.A., *supra*, it is submitted that Carrow only teaches injection molding a pipe of a uniform diameter and thickness. Wyre’s teaching of the use of reinforcement ribs in a culvert pipe do not suggest the desirability of providing reinforcing ribs on an injection molded plastic tee for the inlet or outlet of septic tanks.

D. Reply to Arguments in view of Ramm as modified by Carrow and Morrison

For the reasons discussed in Section II.B., *supra*, with regard to Attachment #5 of the Examiner’s Answer, Ramm does not demonstrate the capability of receiving different sized pipes. What is referred to in the Examiner’s Answer as “steps presented in the port” of Ramm is actually a groove 10 for receiving a rubber ring gasket, and a fitting to accommodate a pipe of a single diameter. Thus, one of ordinary skill in the art would not be motivated to modify Ramm to provide a reducer.

E. Reply to Arguments with respect to the rejection of claims 16 and 20 in view of Morrison as modified by Carrow, Wyre and Pinion

The Examiner’s Answer characterizes claims 16 and 20 as only requiring the use of a filter, not the combination of the filter with the septic process. However, claim 20 specifically

recites “said main body portion houses an effluent filter in said tubular opening, and said lowermost end extends into a clear zone of the septic tank when the tee is mounted at the septic tank outlet” (*see* footnote 1, *supra*). Therefore, at least with respect to claim 20, the claim does require an effluent filter for a septic tank. As to claim 16, it is respectfully submitted that those of ordinary skill in the art would understand an effluent filter to be one that would not clog quickly when exposed to grease, fats, oils, hair, lint, and other floatables in effluent, and resist clogs due to biologic growth on such materials trapped by the effluent filter. A flat screen (15) as disclosed in Pinion, having a circumference which extends across an entire inner diameter of the pipe (14) in which it is positioned, lacks sufficient surface area to resist such clogs, and is therefore not an “effluent filter.”

F. Arguments in view of the affidavits under 37 CFR § 1.132 filed on December 2, 2002, August 7, 2003 and March 25, 2005

The Examiner's Answer argues that the affidavits of Theodore Meyers “just show how were the sales of the device during a certain period of time.” Examiner's Answer, at 12, lines 16-17. However, the affidavits include statements such as the following:

8. Based on my some 20 years of inventive research, development, sales, manufacturing and marketing experience in the on-site waste disposal system component business, the sales figures shown in Appendix A reflect a substantial commercial success for the T-BAFFLE tees. Further, I consider all the commercial success of Tuf-Tite's T-BAFFLE tees to be attributable to the claimed features of the subject patent application, as I know of no other reasons that would have caused such a high volume of sales.

9. Further, this commercial success was realized notwithstanding the fact that use of the T-BAFFLE tees is subject to regulatory approval in many states, and with approvals still pending in certain states. I therefore expect the sales of Tuf-Tite's T-BAFFLE tees to continue to improve as Tuf-Tite obtains regulatory approval for use (i.e., permission to use the tees, as opposed to mandatory use) of the tees in certain states where approval is required, such as in Arkansas and Indiana.

Affidavit of Theodore W. Meyers Under 37 C.F.R. §1.132 (K-I of the Appeal Brief), ¶¶ 8, 9;

11. Based on my some 20 years of inventive, research, development, sales, manufacturing, trade show, and marketing experience in the on-site waste disposal system component business, during which time I have personally experienced the introduction of products ranging from highly commercially successful to unsuccessful, the sales figures shown in Appendix A reflect a substantial commercial success for the T-BAFFLE tees.

Supplemental Affidavit of Theodore W. Meyers Under 37 C.F.R. §1.132 (K-II of the Appeal Brief), ¶ 11; and

20. The strong sales of the TB-4 T-Baffle tees are due to the claimed features of the tee, including: a wall thickness between 0.075" and 0.100" over a substantial portion of an elongated generally cylindrical main body portion; an inlet/outlet hub of an inlet/outlet port, such inlet/outlet hub having a diameter sized to receive a pipe of a first outer diameter (e.g., Schedule 40 pipe) and being adaptable to receive a pipe of a second outer diameter (e.g., SDR-35 pipe), and the diameter of the inlet/outlet hub being greater than the diameter of the elongated main body portion.

21. I know of no other reason, except for the claimed features noted above and the cost savings realized by those claimed features which are passed along to customers, to account for such dramatic sales. For example, the TB-4 T-Baffle tees have not been advertised or marketed in a manner, or at any level, differently from any of the numerous other on-site waste system and related component products sold by Tuf-Tite. Based upon my experience in the industry, including as to marketing and advertising by Tuf-Tite and by others, it is my view that the level of marketing and advertising spent on the TB-4 T-Baffle tees since their introduction would not generate the growth and level of sales experienced in 2001-2004.

Third Affidavit of Theodore W. Meyers Under 37 C.F.R. §1.132 (K-III of the Appeal Brief), ¶¶ 20, 21. These statements demonstrate a sufficient nexus to overcome a *prima facie* case of obviousness.

The Examiner's Answer argues that the objective evidence of non-obviousness is not commensurate in scope with the claims, because the claims are directed to a tee, not the combination of the tee with septic tanks or on-site waste disposal systems. Examiner's Answer, at 13, lines 3-6. However, as discussed *supra* in section II.A., the apparatus of the Applicant's invention, as claimed, is a septic tank tee, and not a tee for plumbing or other applications

besides the inlet or outlet of septic tanks. As such, the objective evidence submitted in and with the three affidavits is commensurate in scope with the claims.

III. THE FAILURE TO CONSIDER EVIDENCE OF COPYING BY OTHERS

As discussed in Section VII.B. of the Appeal Brief, Mr. Meyers' three affidavits present objective evidence of copying by others, which is a well-recognized secondary consideration of non-obviousness. This evidence of copying by others has been ignored, without any adequate discussion of how the declarations or evidence fail to overcome a *prima facie* case of obviousness. There was no mention of this evidence in the final Office action, any previous Office action, or even in the Examiner's Answer. By failing to address this objective evidence, the final Office action has improperly raised the burden on the Applicant to an insurmountable level. *Ex parte Ohsaka*, 2 USPQ2d 1461, 1462 (Bd.Pat.App.&Int. 1987).

Notably, the Examiner's Answer attempts to argue that a prior art reference, namely Ramm, meets the claim language of being adaptable to receive pipes having a first outer diameter and a second (different) outer diameter where the reference allegedly shows a pipe seat having two different diameters (Examiner's Answer, at 10, lines 17-18), which is also referred to in the Examiner's Answer as "steps presented in the port." Examiner's Answer, at 11, line 13. However, inasmuch as Ramm does not in fact disclose a pipe seat having two different diameters, or steps presented in the port in which pipes of different diameters might be accommodated (*see supra*, Section II.B.), the evidence of copying by others is even more compelling evidence of non-obviousness. Referring to Appendix 4 and 5 of the Affidavit of Theodore W. Meyers Under 37 C.F.R. §1.132 (K-I of the Appeal Brief), the Zabel "Versa-Tee™" product has a stepped inlet/outlet port to receive pipes having different outer diameters, namely an SDR 35 pipe and a Schedule 40 pipe. Thus, although the Zabel Versa-Tee™ product

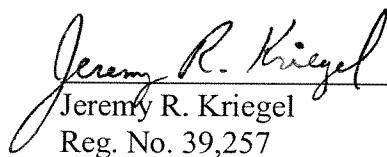
may not require use of a reducer bushing, it is considered to be adaptable to receive pipes of different outer diameters.

The failure to address the Applicant's compelling objective evidence of copying by others is sufficient reason to find that a *prima facie* case of obviousness has not been established, or if established, has been successfully rebutted.

IV. CONCLUSION

The claims on appeal are respectfully submitted to be allowable over the cited art. The Board is respectfully requested to reverse the rejections and direct allowance of the application.

Respectfully submitted,



Jeremy R. Kriegel
Reg. No. 39,257

MARSHALL, GERSTEIN & BORUN LLP
233 South Wacker Drive, Suite 6300 Sears Tower
Chicago, Illinois 60606-6357
Telephone: (312) 474-6300
Facsimile: (312) 474-0448

United States Patent

[11] 3,633,943

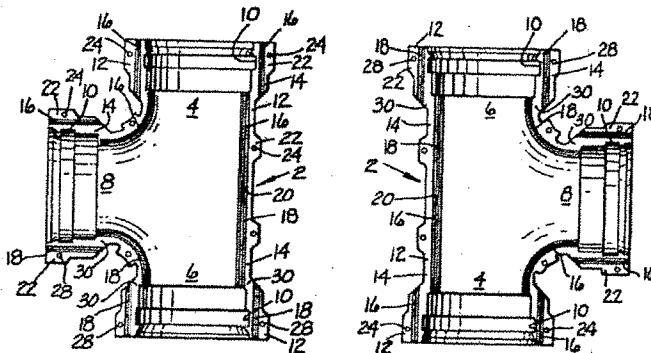
[72] Inventors Joseph Louis Ramm
Metairie, La.;
Joseph Peter Ferraro, Scotch Plains, N.J.;
Joseph Anthony Munder, Westchester,
Ohio
[21] Appl. No. 11,043
[22] Filed Feb. 13, 1970
[45] Patented Jan. 11, 1972
[73] Assignee Johns-Manville Corporation
New York, N.Y.

[56] References Cited
UNITED STATES PATENTS
3,264,013 8/1966 Richardson et al. 285/423 X
3,264,012 8/1966 Giovanazzi et al. 285/22
3,224,795 12/1965 Conley 285/423 X
FOREIGN PATENTS
877,254 9/1961 Great Britain 138/151
Primary Examiner—Dave W. Arola
Attorneys—John A. McKinney and Robert M. Krone

[54] FITTING AND METHOD OF MAKING THE SAME
13 Claims, 5 Drawing Figs.

[52] U.S. Cl. 285/22,
285/156, 285/373, 285/DIG. 16, 285/DIG. 423
[51] Int. Cl. F16l 13/02
[50] Field of Search 138/128,
156, 158, 159, 160, 161, 162, 166, 170, 171, 157;
285/21, 22, 423, 373, 419, 156, DIG. 16; 156/203,
218, 290, 295, 304, 466; 29/157 A, 157 T, 482,
489

ABSTRACT: A fitting for nonpressure pipe is formed by using a pair of identical half sections wherein each half section is formed by molding a filled thermosetting resin reinforced with glass fibers and the pair of half sections are joined in mating relationship by a layer of adhesive.



PATENTED JAN 11 1972

3,633,943

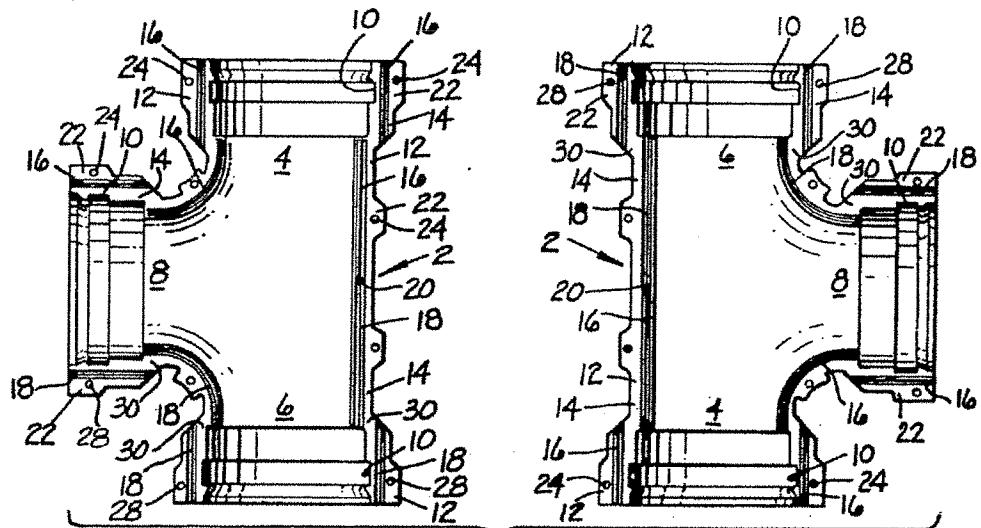


Fig. 1.

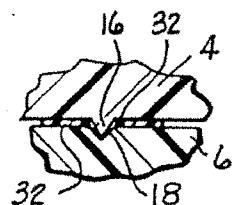
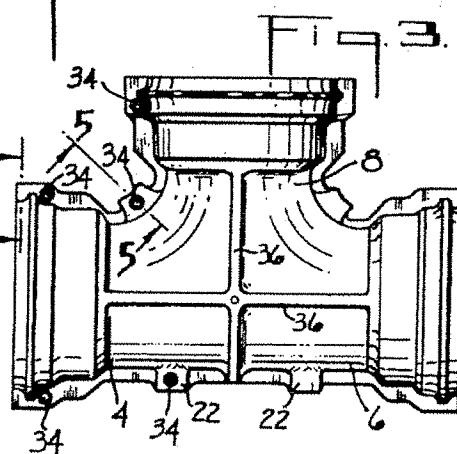
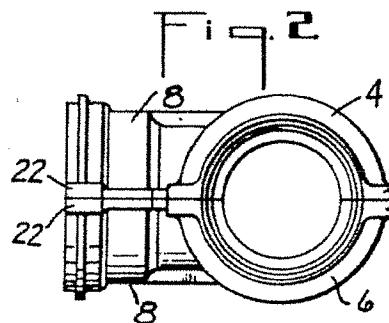


Fig. 4.

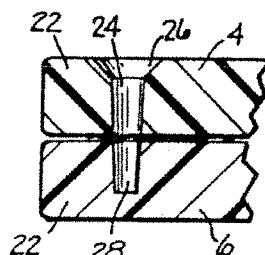


Fig. 5.

INVENTORS,
JOSEPH LOUIS RAMM
JOSEPH PETER FERRARO
JOSEPH ANTHONY MUNDER
BY

John A. McKinney
ATTORNEY

FITTING AND METHOD OF MAKING THE SAME

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to a nonpressure pipe fitting and a method for forming such fitting and in particular to a molded pipe fitting formed from a filled thermosetting resin reinforced with glass fiber and wherein such fitting is particularly useful with a rubber ring joint. Furthermore, the fitting is particularly suited for use with nonpressure asbestos-cement sewer pipe.

2. Description of the Prior Art

For many years, the asbestos-cement pipe industry has used fittings of various natures such as cast iron, blow-molded thermoplastic, and glued together sections of asbestos-cement pipe. All of these fittings present problems in their use with asbestos-cement pipe. The cast iron fitting does not possess the resistance to corrosion of the asbestos-cement pipe. The thermoplastic fitting deforms easily under even modest loads and deforms sharply when the effluent carried by it is at or near 150° F. The glued-together sections of asbestos-cement pipe form a fitting that is not attractive in appearance and is costly to fabricate.

BRIEF SUMMARY OF THE INVENTION

It is an object of this invention to provide a noncorrosive, temperature-resistant, economical and attractive fitting for nonpressure pipe.

It is a further object of this invention to provide a noncorrosive, temperature-resistant, economical and attractive fitting for nonpressure asbestos-cement sewer pipe having a rubber ring joint.

The foregoing objects are accomplished in accordance with the instant invention by molding half sections of a fitting from a filled thermosetting resin reinforced with glass fiber. These half sections are then assembled with suitable adhesive and fasteners to form a fitting. The half sections are designed to provide a continuous and uniformly thick layer of adhesive joining the two half sections together and cooperating therewith to form a rigid and attractive fitting.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be more fully understood and further objects and advantages thereof will become apparent when reference is made to the following detailed description of a preferred embodiment of the invention and the accompanying drawings in which:

FIG. 1 is a top plan view of two half sections of a fitting;

FIG. 2 is an end view of a fitting assembled from the half sections of FIG. 1;

FIG. 3 is a side elevation of a fitting assembled from the half sections of FIG. 1;

FIG. 4 is a partial view in cross section taken on a plane passing through the line 4—4 of FIG. 3; and

FIG. 5 is a partial view in cross section taken on a plane passing through the line 5—5 of FIG. 3.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings and in particular to FIG. 1, there are disclosed two half sections 2 having a shape such that when the half sections are joined, there will be formed a T-fitting for use in pipelines. The half sections are formed by molding preferably using a filled thermosetting resin reinforced with glass fiber. Although the half sections illustrated in FIG. 1 are shaped to form a T-fitting when assembled, it is recognized that the half sections can be shaped to form other fittings when assembled such as L's, Y's, angles, and bends.

Each half section 2 comprises body portions 4, 6, and 8 comprising respectively the half sections of the arms and stem of the T. The end portions of the arms 4 and 6 and the stem 8 are formed in the mold as a bell end having grooves 10 to accommodate rubber ring gaskets which are adapted to cooperate in the assembled fitting with pipe ends inserted therein to form a fluidtight seal.

Each half section 2 terminates in a base 12 having a surface 14 which is designed to mate with another half section. The surface 14 is provided with a plurality of tongues 16 and grooves 18. As illustrated in FIG. 1, the tongues 16 are located on one half side of each half section and the grooves are located on the other half side of the half section. This arrangement is made so that only one mold is required to form the half sections. As illustrated in FIG. 1, the half sections 2 are centered relative to each other by the tongues 16 mating with the grooves 10. Line 20 on FIG. 1 shows the junction of a tongue 16 with a groove 18 at approximately the midpoint of the half section 2. As illustrated in FIG. 4, the height of the tongues 16 is greater than the depth of the grooves 18 so as to space the surfaces 14 of mating half sections from each other a small distance. The base 12 is also provided at spaced intervals with flanges 22. As illustrated in FIG. 5, half of the flanges are molded with an opening 24 having a tapered entrance 26 while the other half of the flanges are provided with holes 28 extending partially therethrough. If desired, the half sections may be centered and spaced by bosses around holes 28 and recesses around opening 24 and the holes 28 may extend completely through the flanges 22. The opening 24 and the hole 28 are preferably tapered so as to minimize the danger of stripping threads.

A fitting illustrated in FIGS. 2 and 3 is made from the half section 2 of FIG. 1 in the following manner. The grooves 14 in each half section 2 are filled with a suitable adhesive such as an epoxy, polyester, or acrylic adhesive. One half section is superposed over the other half section and the two half sections are brought together with the tongues 16 in each half section mating with and entering into the grooves 18 of the other half section. The entry of the tongues 16 into the grooves 18 forces the adhesive out of the grooves 18 and into contact with the adjacent surfaces 14 of both mating half sections 2. The tongues 16 and the grooves 18 are designed so that sufficient adhesive will be present in the grooves 18 so that when the adhesive is forced out of the grooves 18 by the tongues 16, a continuous layer 32 of adhesive will be present between each of the mating surfaces 14 of the half section 2 from one axial end opening to any other axial end opening along one continuous mating line. The thickness of this layer of adhesive, as determined by the difference between the height of the tongues 16 and the depth of the grooves 18, is preferably between 1 and 60 mils thick. In some instances, to insure continuity of the adhesive layer and a proper seal, a continuous line of adhesive will be laid on the surface 14 between the terminal portions of adjacent grooves 18 as indicated at 30.

After the half sections 2 have been mated, steel fasteners 34, such as self-tapping screws, are threaded through the openings 24 into the holes 28 and function to hold the half sections in mating relationship until the adhesive has cured. In FIG. 4 the adhesive as illustrated terminates a short distance on each side of the tongue and groove relationship. However, where additional strength is required in the fittings, sufficient adhesive may be deposited in the grooves 18 so that a layer of adhesive will coincide with the outside and inside edges of surface 14. As illustrated in FIG. 3, each half section is molded with reinforced ribs 36.

Fittings in accordance with the foregoing specification have been formed from a filled thermosetting resin reinforced with glass fibers such as a glass fiber sheet embedded in a matrix of vinyl ester resin. Material of this nature is sold commercially as sheet molding compounds such as that marketed by the Dow Chemical Company under the trade designation DOW SMC-Derakane CX 7000-50. Other fittings were manufactured using bulk molding compounds comprising chopped glass fiber strands imbedded in a matrix of isophthalic polyester resin such as the bulk molding compound marketed by the American Cyanamid Company under the trade designation BMC-L Laminac PDL-7-989. However, it is understood that other thermosetting resins reinforced with glass or other fibers or other fibrous materials may be used in molding the half sections of this invention.

The half sections formed from the above sheet molding compound were joined together with an epoxy-type adhesive such as that marketed by the Smooth-On Company under the trade designation Smooth-On 2-107. Other adhesives such as polyester and acrylic adhesives may also be used within the scope of this invention. The surfaces 14 are preferably sandblasted so as to insure a good bond with the adhesive. In some instances, it may be desirable to prepare the surface using a solvent prior to applying the adhesive. It should be noted that the adhesive used must be selected to insure a good and permanent bond since the half sections throughout their life of operation are held together chiefly by the adhesive. The steel fasteners are used primarily only to hold the half sections in assembled relationship while the adhesive is being cured.

Fittings made as described above were subjected to the usual standard flexural and impact tests for fittings for use with asbestos-cement sewer pipe. These fittings were found to have physical characteristics similar to the fittings presently used for such service and are acceptable for such commercial use.

What we claim is:

1. A fitting comprising:

- a. first and second half lateral sections adapted to be mated together to form said fitting for connecting pipe ends and defining a fluid-carrying connection therebetween,
- b. a layer of adhesive joining said first and said second half sections in mating relationship, and
- c. means integral with each of said first and second half sections and arranged in cooperating relationship to space said first half section from said second half section and to control the thickness of said layer of adhesive.

2. A fitting as defined in claim 1 wherein said means comprises:

- a. cooperating tongues and grooves in said first and second half sections, and
- b. said tongues having a height greater than the depth of said grooves.

3. A fitting as defined in claim 2 wherein:

- a. each of said first and second half sections is provided with a plurality of tongues and grooves.

4. A fitting as defined in claim 2 wherein:

- a. said first and second half sections are molded from a filled thermosetting resin reinforced with fiber.

5. A fitting as defined in claim 2 wherein:

- a. said first and second half sections are molded from a filled thermosetting resin reinforced with glass fiber.

6. A fitting as defined in claim 2 and further comprising:

- a. means for initially holding said first and second half sections in mating relationship until they are joined by said layer of adhesive.

7. A fitting as defined in claim 2 wherein:

- a. said first and said second half sections in mating relationship are spaced from each other a distance of between about 1 and 60 mils.

8. A fitting as defined in claim 2 wherein:

- a. said layer of adhesive is continuous throughout the extent of the mated portions of said first and second half sections

5

10

15

20

25

30

35

40

45

50

55

60

65

70

75

from one end opening to another end opening of said fitting.

9. A fitting as defined in claim 8 wherein:

- a. said first and said second half sections are identical to each other.

10. A method for forming a fitting comprising:

- a. molding a plurality of identical half sections from a filled thermosetting resin reinforced with fibers, each half section having mating surfaces with a plurality of tongues and grooves therein with the tongues having a greater height than the depth of the grooves,
- b. filling all of said grooves in said two half sections with an adhesive,
- c. mating said two half sections with the tongues in one half section nested in the grooves of the other half section and the tongues in said other half section nested in the grooves of said one half section but with said mating surfaces of said half sections spaced from each other a short distance by the tongues and grooves, and
- d. applying sufficient force to said mated half sections to squeeze a uniform layer of said adhesive out of said groove to form a continuous layer of adhesive in contact with said surfaces of each half section and extending throughout the axial extent of the mated portions of said half sections.

11. A fitting as defined in claim 1 wherein said means comprises:

- a. bosses on a portion of the first half section for cooperating with recesses in a portion of the second half section, and
- b. said bosses having a height greater than the depth of the recesses.

12. A fitting as defined in claim 11 including means adjacent the bosses and recesses for holding said first and second half sections in mating relationship until supplemented by the holding action of said adhesive therebetween.

13. A fitting comprising:

- a. first and second lateral half sections of molded thermosetting resin reinforced with glass fibers and are adapted to be mated together to form said fitting for connecting pipe ends and defining a fluid-carrying connection therebetween,
- b. boss means on portions of the first half section for cooperating with recess means in portions of the second half section,
- c. generally planar surfaces on either side of respective boss means and recess means adapted to face each other when said halves are mated,
- d. said boss means having a greater height than the depth of the recess means thereby establishing spacing between the facing surfaces,
- e. a layer of adhesive between said surfaces joining said first and second half sections in mating relationship, and
- f. means adjacent cooperating boss means and recess means for fixedly holding the first and second half sections in mating relationship until supplemented by the holding action of said adhesive between and joining the surfaces.

* * * * *